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DISTRIBUTION OF HEALTH SERVICES IN THE STRUCTURE OF STATE GOVERNMENT*

CHAPTER V—SANITATION BY STATE AGENCIES

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Current public health programs, which embrace some thirty-five separate categories of activity, represent a blending of old and new concepts concerning public responsibility in matters pertaining to community and personal health; yet the basic objective of any public health program has always been the control of communicable diseases. Since it was discovered quite early that certain types of disease are transmitted through food and water, environmental sanitation soon became one of the outstanding public health weapons. Development of this specific field of activity parallels the development of the entire public health movement. In other words, the scope of environmental sanitation, like that of the whole public health realm, has expanded with the passage of time. Whereas the first sanitation efforts were directed primarily toward abatement of nuisances, sanitary supervision of water supplies and sewage disposal facilities may be regarded as the earliest definitive measures. These several efforts have gradually broadened until they now include prevention

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Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter I. The composite pattern of State health services. Pub. Health Rep., 56:1673 (August 22, 1941). Reprint No. 2306.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter II. Communicable disease control by State agencies. Pub. Health Rep., 56:2233 (November 21, 1941). Reprint No. 2334.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter III. Tuberculosis control by State agencies. Pub. Health Rep., 57:65 (January 16, 1942). Reprint No. 2348.

Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government—Chapter IV. Venereal disease control by State agencies. Pub. Health Rep., 57:553 (April 17, 1942). Reprint No. 2360.

Succeeding chapters will be published in subsequent issues of the PUBLIC HEALTH REPORTS.

of stream pollution; sanitation of milk, shellfish, and other foods, as well as the food-handling establishments; recreational sanitation, covering swimming pools, bathing beaches, roadside picnic grounds, and camps of various kinds; housing and plumbing control; garbage collection and disposal; and control of insect vectors of disease. Recently there has been a distinct revival of interest in air sanitation, which covers temperature, humidity, dust, smoke, fumes, odors, and bacteria—especially the viruses.

Naturally, this expansion has not occurred with complete uniformity among the several States. Neither has it been entirely centered within the health department, the agency normally responsible for activities designed to promote and conserve human health. At the same time, certain common characteristics have been observed consistently in all State sanitation programs. While these facts are known in a general way, the literature apparently contains no source material which depicts the situation as it exists State by State. True, Public Health Bulletin No. 184 (Revised), "Health Departments of States and Provinces of the United States and Canada,"¹ pictures the sanitary engineering function of State health departments as it applied in 1930. However, since the last decade has witnessed such remarkable growth in the many branches of public health endeavor, statements contained in this publication now appear to be outmoded. Consequently, a third edition of Public Health Bulletin 184—bringing information up to date as of the year 1940—was undertaken.

From data collected by the United States Public Health Service in pursuance of this project, it is possible to describe the sanitation activities carried on, not by the health department alone but by all official agencies of State government during the survey year (1940), together with the extent to which agreement and disagreement obtain among the various plans. Construction of such a picture is the purpose of this article which is the fifth chapter of the series "Distribution of Health Services in the Structure of State Government,"² the third edition of Public Health Bulletin No. 184. As pointed out in previous chapters of this series, the survey referred to was limited to activities having a direct bearing on human health. Only those carried on by all departments of State government were included; contributions of voluntary and local health agencies were not taken into account.

Because of the numerous ramifications of the complete problem of sanitation, discussion is facilitated by grouping activities of the several agencies of State government under three major headings,

¹ Ferrell, John A., Smillie, Wilson G., Covington, Platt W., and Mead, Pauline A.; International Division of the Rockefeller Foundation for the Conference of State and Provincial Health Authorities of North America; Health Departments of States and Provinces of the United States and Canada. Public Health Bulletin No. 184 (Revised). United States Government Printing Office, Washington, 1932.

² See footnote *.

namely, sanitation of water supplies and sewerage systems, control of foods and drugs, and miscellaneous sanitation activities. Each field of service will be accorded a separate section in this report and the functions of State agencies in over-all programs for the several branches of sanitation will be summarized according to the extent of their participation in any one or any combination of the following types of activities: Regulation, promotion, education, supervision and/or consultation, financial aid, and direct service.

SANITATION OF WATER SUPPLIES AND SEWERAGE SYSTEMS

Water supplies and sewerage systems which serve a community are classified as "public," and those which serve a single family are designated as "private." Between these two extremes are facilities termed "semipublic"—those designed for tourist camps, roadside parks, comfort stations, industrial establishments, schools, hospitals, or other institutions serving a number of persons but not connected with public accommodations. Because the existing types of water supplies and sewage disposal facilities are so widely diversified, their sanitary control involves problems ranging from the design and operation of a complex municipal water purification or sewage treatment plant to the location of a private well or septic tank. In other words, the province of sanitation extends from simple inspections to technical engineering procedures.

For the most part, State³ concern is centered primarily in the routine control of public water supplies and sewerage systems, with secondary consideration for those of a semipublic or private nature. At the same time, industrial wastes receive particular attention when they represent a source of stream pollution. The health department is the official agency having major responsibility, but in nearly three-fourths of the jurisdictions one or more other units of State government collaborate with the health department on special features of the program. For instance, several departments of labor participate in the regulation of industrial water supplies and sewerage systems; school sanitation is sometimes the joint concern of the departments of education and health; a number of State universities cooperate with the health department in training operators of water and sewage treatment plants; and special sanitary water boards or commissions supplement services of the health department in prevention of stream pollution. Divided control obtains to a greater degree in the field of sewerage than in the regulation of water supplies.

³ The term "State" as used in the discussion which follows includes the States, the Territories, the District of Columbia, and the Virgin Islands.

TABLE 1.—*Official State agencies participating in the sanitary control of water supplies and sewage disposal facilities in each State and Territory, the District of Columbia, and the Virgin Islands**

State or Territory	Department of State government							Other
	Health	Agriculture	Labor	Education	Independent State laboratory	State university or college	Independent department of engineering, public utilities, etc.	
Alabama	X			X	X			
Arizona	XX							
Arkansas	X							
California	X		X			X		
Colorado	X		X			X		
Connecticut	X			X				X
Delaware	X							
District of Columbia	X					X		X
Florida	X					X		
Georgia	X							
Idaho	X					X		
Illinois	X					X		
Indiana	X					X		
Iowa	X					X		
Kansas	X					X		
Kentucky	X					X		
Louisiana	X					X		X
Maine	X					X		
Maryland	X					X		
Massachusetts	X					X		
Michigan	X		X			X		
Minnesota	X		X			X		
Mississippi	X				X	X		
Missouri	X					X		
Montana	X							
Nebraska	X							
Nevada	X							
New Hampshire	X							
New Jersey	X							
New Mexico	X							
New York	X							
North Carolina	X							
North Dakota	X							
Ohio	X							
Oklahoma	X							
Oregon	X							
Pennsylvania	X							
Rhode Island	X							
South Carolina	X							
South Dakota	X							
Tennessee	X							
Texas	X							
Utah	X							
Vermont	X							
Virginia	X							
Washington	X		X					
West Virginia	X							
Wisconsin	X							
Wyoming	X							
Alaska	X							
Hawaii	X							
Puerto Rico	X							
Virgin Islands	X							

*Any differences between information presented in this table and corresponding entries in table 1, ch. I, of this series are the result of further refinement of the data since publication of the initial article.

* The department of health is really a division (Idaho) and bureau (Maine) of public health, subordinate to the department of public welfare (Idaho) and the department of health and welfare (Maine).

Table 1 identifies the State agencies which contribute in any way to the sanitary control of water supplies or sewerage systems, irrespective of whether the character of such facilities is public, semipublic, or private. However, this tabulation does not distinguish between the agency chiefly accountable and those rendering service of an auxiliary nature. Such information may be obtained from table 2.

This second table is designed to summarize precise functions of the various State agencies participating in sanitary supervision of all types of water supplies and sewerage facilities. The code system used for identification of agencies engaged in specific activities is explained at the end of the table. Not only does this tabulation emphasize variations among the several States, but it also highlights differences within a single State in its concern for the three classes of facilities, public, semipublic, and private.

Uncontrolled sources of drinking water and heterogeneous methods of sewage disposal have given rise to many health problems. Certain aspects of these problems have been selected for regulatory control among State agencies which seek correction of environmental conditions hazardous to health. Without exception, some regulatory power over water supplies and sewerage systems has been delegated to each State health department, but extent of authority varies according to the classification of facilities. Health departments have what may be regarded as exclusive regulatory jurisdiction over municipal water supplies, except in the District of Columbia and Maine where an independent department of engineering and a department of public utilities, respectively, operate for this purpose. When regulation of the treatment and disposition of municipal sewage is involved, however, the health department authority of 10 States is reinforced by extended power given to especially created sanitary water boards, commissions, or authorities which exist for the sole purpose of controlling, preventing, and abating pollution of bodies of water. As a rule, the health department is the active agent for these special sanitation groups which generally consist of ex-officio membership and function largely for purposes of fact-finding or regulation.

The specific items covered by the regulatory functions of State health departments with respect to municipal water supplies and sewage disposal are not always the same. Some which are more frequently included pertain to elimination of cross connections, submission of plans prior to construction or extension of facilities, requirement of plant operating records, establishment of training standards for operators of public water supply systems and sewage treatment plants, laboratory checking of adequacy of treatment, and methods of preventing stream pollution.

TABLE 2.—*Department of State government* responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands*

Activity	State or Territory							
	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	District of Columbia
Promulgates and/or enforces State laws, rules, and regulations governing water supplies and sewage disposal facilities for:								
Municipalities.....	1	1	1	1	1	1, 8 b	1	7, 9
Schools.....	1, 4	1	1	1	1, 3	1, 4 b	1	1 b, 7, 9
Industries.....	1	1	1	1 b, 3 c	1, 3	1, 8 b	1	1 b, 7, 9
Camps, roadside parks, and comfort stations.....	1	1	1	1, 3	1, 3	1	1	1 b, 7, 9
Private premises.....	1 b	—	1 b	1 b	1 d	1	1 b	1, 7, 9
Promotes local programs of control (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).....	1	1	1	1	1	1 e	1 b	—
Conducts educational programs in water supply and sewage disposal for:								
The general public.....	1	1	1	1	1	1	1	1 b
Operators of public water systems and sewage treatment plants.....	1	—	—	1, 6	1, 6	1	—	7 b
Supervises and/or provides consultation service to local organizations (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).....	1	1	1	1	1	1 e	1	—
Distributes and/or administers financial grants-in-aid to local health units for sanitation activities.....	1 f	1 f	1 f	1 f	1 f	1 f	—	—
Operates a direct service program:								
Approves plans for public water supplies (including treatment plants) and sewerage installations or extensions.....	1	(8)	1	1 b e	1	1, 8 b	1	7 b
Inspects public water supplies and sewerage systems—								
Periodically.....	1	1 b	1 b	—	1 b	1	1 b	7 b
Routinely, but not at regular intervals.....	1	1 e	1 e	—	1 e	—	1 b	1 b 7 c
Upon request or complaint only.....	—	—	—	—	—	—	—	—
Provides laboratory service for testing safety of water from public supplies, adequacy of sewage treatment by public plants, and/or degree of stream pollution.....	1	5 e	1	1	1	1	1 e	1
Licenses or certifies operators of public water systems and sewage treatment plants.....	—	—	1 g	—	—	1	—	—
Approves plans for installations of water supplies and sewage disposal facilities of semipublic places (camps, industries, schools, other institutions, etc.).....	—	—	—	—	—	—	—	—
Inspects semipublic water supplies and sewage disposal facilities—								
Periodically.....	—	—	—	—	—	—	—	—
Routinely, but not at regular intervals.....	1 b	1 b	1 e	1 b 3 b	1 e	1 e b	1 b	1 b 7 b
Upon request or complaint only.....	—	—	—	—	—	—	—	—
Makes laboratory tests of water samples from semipublic supplies.....	—	—	—	—	—	—	—	—
Condemns and closes to use unsatisfactory semipublic supplies.....	—	—	—	—	—	—	—	—
Inspects private water supplies and sewage disposal facilities—								
Periodically.....	—	—	—	—	—	—	—	1 e
Routinely, but not at regular intervals.....	—	—	—	—	—	—	—	1 b
Upon request or complaint only.....	—	—	—	—	—	—	—	—
Makes laboratory tests of water samples from private supplies.....	—	—	—	—	—	—	—	—
Engages in activities to control stream pollution from—								
Municipal sewage.....	—	—	1	1	1	1, 8	1 d	7
Mine drainage.....	—	—	1	1	1	—	—	—
Industrial waste.....	—	—	1	1	1	8	—	7
Other and/or unspecified sewage or waste.....	1 d	—	1	1	—	8	—	7
Furnishes direct advisory service to individuals, corporations, and municipalities as to construction and maintenance of most suitable type of water supply or sewerage system.....	1, 4 b	1	1	1	1	1	1	3
Renders additional services not covered in this classification.....	1	—	1	1	1	1	1	1

See Code at end of table.

TABLE 2.—*Department of State government responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Florida	Georgia	Idaho *	Illinois	Indiana	Iowa	Kansas	Kentucky
Promulgates and/or enforces State laws, rules, and regulations governing water supplies and sewage disposal facilities of:								
Municipalities.....	1	1	1	1 e, 8 b	1, 9 b	1	1	1
Schools.....	1	1	1	1 e, 8 b	1	1 d		1
Industries.....	1	1	1	1 e, 8 b	1, 9 b	1 d	1	1
Camps, roadside parks, and comfort stations—Private premises.....	1	1	1	1 e, 8 b	1	1 d, 2	1	1 b
Promotes local programs of control (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).....	1	1	-----	1 d, 8 b	1	1	1	1
Conducts educational programs in water supply and sewage disposal for:								
The general public.....	1	1	1	1	1	1	1	1
Operators of public water systems and sewage treatment plants.....	1, 6 b	1	1	1, 6	1	1, 6	1, 6	1 *
Supervises and/or provides consultation service to local organizations (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).....	1	1	1	1, 8 b	1	1	1	1
Distributes and/or administers financial grants-in-aid to local health units for sanitation activities.....	1 f	1 f	1 f	-----	1 f	1 f	1 f	1 f
Operates a direct service program:								
Approves plans for public water supplies (including treatment plants) and sewerage installations or extensions.....	1	1	1	1 e, 8 b	1	1	1	1
Inspects public water supplies and sewerage systems—Periodically.....	1	1	1	1 b	1 b	1 b	1 b	1
Routinely, but not at regular intervals.....	1	1	1	1 e	1 e	1 e	1 e	-----
Upon request or complaint only.....	-----	-----	-----	-----	-----	-----	-----	-----
Provides laboratory service for testing safety of water from public supplies, adequacy of sewage treatment by public plants, and/or degree of stream pollution.....	1	1	1	1	1 i	1, 6	1, 6 i	1 *
Licenses or certifies operators of public water systems and sewage treatment plants.....	-----	-----	-----	1	-----	-----	-----	-----
Approves plans for installations of water supplies and sewage disposal facilities of semipublic places (camps, industries, schools, other institutions, etc.).....	1 h	1 h	-----	1, 8 b h	1	-----	1 h	1
Inspects semipublic water supplies and sewage disposal facilities—Periodically.....	1 e	1 b b	-----	-----	-----	1 b b	-----	-----
Routinely, but not at regular intervals.....	1 e	-----	-----	1 e	1 e	{ 1 b h 2 h }	-----	1
Upon request or complaint only.....	1 b	-----	1 b, 8 b	1 b	1 e	-----	-----	-----
Makes laboratory tests of water samples from semipublic supplies.....	1	1	1	1	1 k, 6 k	{ 1 i k 6 i k }	1	-----
Condemns and closes to use unsatisfactory semipublic supplies.....	1	1	1	-----	1	2	1	1
Inspects private water supplies and sewage disposal facilities—Periodically.....	1	1	1	-----	-----	-----	-----	-----
Routinely, but not at regular intervals.....	1	1	1 *	1	1	1	1 *	1
Upon request or complaint only.....	1 k	1 k	1 k	1	1 k, 6 k	{ 1 i k 6 i k }	1 k	-----
Makes laboratory tests of water samples from private supplies.....	1 k	1 k	1 k	1	1 k, 6 k	{ 1 i k 6 i k }	1 k	-----
Engages in activities to control stream pollution from—Municipal-sewage.....	1	-----	-----	8	1, 9	1	1	1
Mine drainage.....	-----	-----	-----	8	1, 9	1	1	1
Industrial waste.....	1	1 s	-----	8	1, 9	1	1	1
Other and/or unspecified sewage or waste.....	1	-----	1 s	8	1, 9	1	1	1
Furnishes direct advisory service to individuals, corporations, and municipalities as to construction and maintenance of most suitable type of water supply or sewerage system.....	1	1	1	1, 9	1	1	1	1
Renders additional service not covered in this classification.....	1	1	1	8	1	-----	1	1

TABLE 2.—*Department of State government responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Louisiana	Maine *	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Promulgates and/or enforces State laws, rules, and regulations governing water supplies and sewage disposal facilities of:								
Municipalities	1	7 e	1	1 e	1, 8 b d	1	1	1
Schools	1	1 b	1 b		4	1	1	1
Industries	1	1	1	3 e	3, 8 b d	1, 3	1 b	1
Camps, roadside parks, and comfort stations	1	1	1		1 b	1	1	1
Private premises	1	1 b	1 b		1 b	1 b	1 b	1
Promotes local programs of control (including W. P. A. projects for constructing privies and septic tanks and for repairing wells)	1		1	1 e	1 e	1 e	1	1
Conducts educational programs in water supply and sewage disposal for:								
The general public	1	1, 7 e	1	1	1	1	1	1
Operators of public water systems and sewage treatment plants	1, 6		1	1, 6	1	1, 6	1	1, 6
Supervises and/or provides consultation service to local organizations (including W. P. A. projects for constructing privies and septic tanks and for repairing wells)	1	1 e, 7	1	1 e	1 e	1 e	1	1
Distributes and/or administers financial grants-in-aid to local health units for sanitation activities	1 f		1 f	1 f	1 f		1 f	1 f
Operates a direct service program:								
Approves plans for public water supplies (including treatment plants) and sewerage installations or extensions	1	1 e, 7	1	1	1	1	1	1
Inspects public water supplies and sewerage systems								
Periodically	1 b	1 e, 7 e	1		1 b		1	1 e
Routinely, but not at regular intervals	1 e	1 b b		1	1 e	1 e	1 b	
Upon request or complaint only								
Provides laboratory service for testing safety of water from public supplies, adequacy of sewage treatment by public plants, and/or degree of stream pollution	1	1	1	1	1	1	1, 5	1 f
Licenses or certifies operators of public water systems and sewage treatment plants						1		
Approves plans for installations of water supplies and sewage disposal facilities of semipublic places (camps, industries, schools, other institutions, etc.)	1	1	1 k	1 b		1 e		
Inspects semipublic water supplies and sewage disposal facilities								
Periodically	1 b b	1 b		1 e	1 e		1 b b	
Routinely, but not at regular intervals	1 e	1 b	1 e		{ 1 b b 3 e b }			1
Upon request or complaint only		{ 1 b b 3 e b }	1 b			1		
Makes laboratory tests of water samples from semipublic supplies	1	1	1	1	1	1		1 f
Condemns and closes to use unsatisfactory semipublic supplies	1			1	1			1
Inspects private water supplies and sewage disposal facilities								
Periodically								
Routinely, but not at regular intervals	1 e	1 b		1 e	1 e	1 e	1 e	1
Upon request or complaint only								
Makes laboratory tests of water samples from private supplies	1	1	1	1	1	1		1 f
Engages in activities to control stream pollution from—								
Municipal sewage	1	7 d	1		1, 8	1	1	1 k
Mine drainage			1		1, 8			
Industrial waste	9	7 d	1		1, 8	1	1	
Other and/or unspecified sewage or waste	9	7 d		1 d	1, 8	1		
Furnishes direct advisory service to individuals, corporations, and municipalities as to construction and maintenance of most suitable type of water supply or sewerage system	1	1, 7	1	1	1	1		1
Renders additional service not covered in this classification	1	1	1	1	1	1	1	1

See Code at end of table.

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TABLE 2.—*Department of State government responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina
Promulgates and/or enforces State laws, rules, and regulations governing water supplies and sewage disposal facilities of:								
Municipalities.....	1	1	1	1	1, 8 b d	1, 8 b d	1, 8 b d	1
Schools.....	1 d	1 d	1	1, 4	1 d	1	1 b, 4	1
Industries.....	1 d	1 e	1	1	{ 1 b d, 3 e 8 b d }	1, 8 b d	{ 1 b, 3 e 8 b d }	1
Camps, roadside parks, and comfort stations.....	1 d		1	1	1 d	1	1	1
Private premises.....	1 b d		1 b	1 b	1 d	1 b		1
Promotes local programs of control (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).....		1	1		1	1	1 *	1
Conducts educational programs in water supply and sewage disposal for:								
The general public.....	1	1	1	1	1	1	1	1
Operators of public water systems and sewage treatment plants.....	1		1 *	1	6		1, 6	1
Supervises and/or provides consultation service to local organizations (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).....								
Distributes and/or administers financial grants-in-aid to local health units for sanitation activities.....	1	1	1	1 *	1	1	1 *, 4 e	1
Operates a direct service program:						1 †	1 †	1 †
Approves plans for public water supplies (including treatment plants) and sewage installations or extensions.....	1	1		1	1	1	1	1
Inspects public water supplies and sewerage systems:								
Periodically.....	1 b	1			1 b	1 b	1	
Routinely, but not at regular intervals.....	1 e		1	1 e 1 b	1 e	1 e		1
Upon request or complaint only.....								
Provides laboratory service for testing safety of water from public supplies, adequacy of sewage treatment by public plants and/or degree of stream pollution.....	1	1 e	1, 6	1	1	1	1	1 *
Licenses or certifies operators of public water systems and sewage treatment plants.....					1		1	
Approves plans for installations of water supplies and sewage disposal facilities of semipublic places (camps, industries, schools, other institutions, etc.).....	1 b	1 b d	1	1			1	1
Inspects semipublic water supplies and sewage disposal facilities—								
Periodically.....	1 b h		1 b	1 b (3 b h 4 b h)	1 e	1	1 e	1 b
Routinely, but not at regular intervals.....	1 e	1 b h	1 b h		1 b d	1 e	1 b	1 e
Upon request or complaint only.....	1 k			1	1		1	1 k
Makes laboratory tests of water samples from semipublic supplies.....	1		1	1	1	1	1	1
Condemns and closes to use unsatisfactory semipublic supplies.....								
Inspects private water supplies and sewage disposal facilities—								
Periodically.....								
Routinely, but not at regular intervals.....	1 e	1 e	1	1 b	1	1 e	1 b	1
Upon request or complaint only.....	1 k	1 k	1 k	1	1 k			1 k
Makes laboratory tests of water samples from private supplies.....								
Engages in activities to control stream pollution from—								
Municipal sewage.....	1			1	8	1	1, 8	1
Mine drainage.....	1				8	8 d		1
Industrial waste.....	1			1	8	8 d	1, 8	1
Other and/or unspecified sewage or waste.....	1			1			1, 8	1
Furnishes direct advisory service to individuals, corporations, and municipalities as to construction and maintenance of most suitable type of water supply or sewerage system.....	1	1	1	1	1	1	1	1
Renders additional service not covered in this classification.....	1	1	1	1	1	1	1	1

See Code at end of table.

TABLE 2.—*Department of State government responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota
Promulgates and/or enforces State laws, rules, and regulations governing water supplies and sewage disposal facilities of:								
Municipalities	1	1	1	1, 8 b d	1, 8 b	1	1	1
Schools	1	1	1, 4	1, 8 b d	1, 4 b	1	1	
Industries	1	1	1, 8	1, 8 b d	1, 8 b	1, 3 e	1	8 b d
Camps, roadside parks, and comfort stations	1, 5 e	1 e	1	1	1	1	1	2
Private premises	1 b			1 b	1 d	1		
Promotes local programs of control (including W. P. A. projects for constructing privies and septic tanks and for repairing wells)	1	1 *	1	1	1		1	1
Conducts educational programs in water supply and sewage disposal for:								
The general public	1	1	1	1	1	1	1	1
Operators of public water systems and sewage treatment plants	1	1	1, 6	1, 6			1	1
Supervises and/or provides consultation service to local organizations (including W. P. A. projects for constructing privies and septic tanks and for repairing wells)	1	1 *	1	1	1	1	1	1
Distributes and/or administers financial grants-in-aid to local health units for sanitation activities	1 *	1 *	1 *	1 *			1 *	1 *
Operates a direct service program:								
Approves plans for public water supplies (including treatment plants) and sewerage installations or extensions	1	1	1	1, 8 b d	1	1 b	1	1
Inspects public water supplies and sewerage systems:								
Periodically	1	1 b		1, 8 b d		1 b	1	
Routinely, but not at regular intervals				1, 8 b d	1	1 *		1 a
Upon request or complaint only	1 *							1 b
Provides laboratory service for testing safety of water from public supplies, adequacy of sewage treatment by public plants, and/or degree of stream pollution	1	1 *	1	1 e 6 e	1	1	1 e i	1
Licenses or certifies operators of public water systems and sewage treatment plants			1	1 e g				
Approves plans for installations of water supplies and sewage disposal facilities of semipublic places (camps, industries, schools, other institutions, etc.)	1	1 b						
Inspects semipublic water supplies and sewage disposal facilities:								
Periodically	1 b, 9 e			1 e	1 b	1 e	1 b	
Routinely, but not at regular intervals	1 e, 5 e			1 b	1 b	1 b		
Upon request or complaint only	1 b	1 b	8 b b	8 b b				1 b, 2 b b
Makes laboratory tests of water samples from semipublic supplies	1, 5	1		1	1	1	1	1
Condemns and closes to use unsatisfactory semipublic supplies		1 b		1	1	1		
Inspects private water supplies and sewage disposal facilities:								
Periodically								
Routinely, but not at regular intervals	1	1 b	1	1	1	1 b	1	1
Upon request or complaint only								
Makes laboratory tests of water samples from private supplies	1 *			1 *	1	1 *	1 *	
Engages in activities to control stream pollution from:								
Municipal sewage	1	1	1	8	1, 8	1	1	1, 8
Mine drainage	1	1	8	8		1		1, 8
Industrial waste	1	1	1, 8	8	1, 8	1	1	1, 8
Other and/or unspecified sewage or waste	1	1	1, 8	8		1	1	
Furnishes direct advisory service to individuals, corporations, and municipalities as to construction and maintenance of most suitable type of water supply or sewerage system	1	1	1	1	1	1	1	1
Renders additional service not covered in this classification	1	1	1		1	1	1	1

See Code at end of table.

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TABLE 2.—*Department of State government responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin
Promulgates and/or enforces State laws, rules, and regulations governing water supplies and sewage disposal facilities:								
Municipalities	1	1	1	1	1	{ 1, 7 ^{a d} 9 ^b	{ 1, 8 ^{b d} 1	1, 8 ^{b d}
Schools		1	1	1	1 ^{b, 4^c}	1		1
Industries	1 b, 9 b	1	1	1	1	1, 3 ^a	1, 8 ^{b d}	1, 8 ^{b d}
Camps, roadside parks, and comfort stations	9	1	1	1	1	1	1	1
Private premises		1	1 ^b	1 ^c	1	1 ^d	1	1
Promotes local programs of control (including W. P. A. projects for constructing privies and septic tanks and for repairing wells):								
The general public	1	1	1	1	4	1	1	1
Operators of public water systems and sewage treatment plants	1, 6 ^a	1, 4	-----	-----	1	1	1	1, 6
Supervises and/or provides consultation service to local organizations (including W. P. A. projects for constructing privies and septic tanks and for repairing wells):								
Distributes and/or administers financial grants-in-aid to local health units for sanitation activities	1 ^t	1 ^t	1 ^t	-----	1 ^t	1 ^t	1 ^t	1 ^t
Operates a direct service program:								
Approves plans for public water supplies (including treatment plants) and sewerage installations or extensions	1	1	-----	1	1 ^{a e}	1	1	1
Inspects public water supplies and sewerage systems:								
Periodically	1	-----	1 ^b	-----	-----	-----	-----	1 ^a
Routinely, but not at regular intervals	-----	1 ^a	1 ^a	1	1	1	1	1
Upon request or complaint only	1 ^b	-----	-----	-----	-----	-----	-----	-----
Provides laboratory service for testing safety of water from public supplies, adequacy of sewage treatment by public plants, and/or degree of stream pollution	1	1	1 ^a	1 ^a	1 ^a	1	1	1
Licenses or certifies operators of public water systems and sewage treatment plants	1 ^{a e}	1	-----	-----	-----	-----	1	-----
Approves plans for installations of water supplies and sewage disposal facilities of semipublic places (camps, industries, schools, other institutions, etc.)	-----	1	-----	1	1 ^a	1 ^k	1	-----
Inspects semipublic water supplies and sewage disposal facilities:								
Periodically	-----	-----	-----	-----	1 ^a	-----	1 ^{a b}	-----
Routinely, but not at regular intervals	1 ^{b h}	1 ^a	1	1 ^b	1 ^b	-----	1 ^{b b}	1 ^b
Upon request or complaint only	1 ^b	1	1	1 ^a	-----	1	1 ^a	1 ^b
Makes laboratory tests of water samples from semipublic supplies	1	1	1	1	1 ^k	1 ^k	1	1
Condemns and closes to public use unsatisfactory semipublic supplies	1	-----	1	-----	-----	1	1	1
Inspects private water supplies and sewage disposal facilities:								
Periodically	-----	-----	-----	-----	1 ^a	-----	1 ^{a b}	-----
Routinely, but not at regular intervals	-----	-----	-----	-----	-----	-----	-----	-----
Upon request or complaint only	1 ^a	1 ^b	1 ^a	1 ^a	1	1	-----	1
Makes laboratory tests of water samples from private supplies	1 ^k	-----	1 ^k	1 ^k	1 ^k	1 ^k	1	1 ^k
Engages in activities to control stream pollution from:								
Municipal sewage	1	1	1	-----	-----	1, 9	1, 8	1, 8
Mine drainage	1	1	1	-----	-----	-----	1, 8	1, 8
Industrial waste	1	1	1	-----	-----	1, 9	1, 8	1, 8
Other and/or unspecified sewage or waste	1	1	1	1 ^{a g}	1 ^{a g}	-----	1, 8	1, 8

See Code at end of table.

TABLE 2.—*Department of State government responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin
Operates a direct service program—Con.								
Furnishes direct advisory service to individuals, corporations, and municipalities as to construction and maintenance of most suitable type of water supply or sewerage system.	1	1	1	1	1	1	1	1
Renders additional service not covered in this classification.		1	1	1	1, 2	1	1	1

Activity	State or Territory				
	Wyoming	Alaska	Hawaii	Puerto Rico	Virgin Islands
Promulgates and/or enforces State laws, rules, and regulations governing water supplies and sewage disposal facilities of:					
Municipalities	1	1	1	1	1
Schools	1, 4 b	1	1	1	1
Industries	1	1	1	1	1 b
Camps, roadside parks, and comfort stations	1	1 b	1 b	1	1 b
Private premises	1 b	1 b	1 b	1	1 b
Promotes local programs of control (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).	1	1 *	1 *	1	-----
Conducts educational programs in water supply and sewage disposal for:					
The general public	1	1	1	1	1
Operators of public water systems and sewage treatment plants				1	1 *
Supervises and/or provides consultation service to local organizations (including W. P. A. projects for constructing privies and septic tanks and for repairing wells).	1	1 *	1 *	1	1 *
Distributes and/or administers financial grants-in-aid to local health units for sanitation activities				1 *	1 *
Operates a direct service program:					
Approves plans for public water supplies (including treatment plants) and sewerage installations or extensions	1	1	1	1	-----
Inspects public water supplies and sewerage systems—					
Periodically	1	1	1 *	1 b	-----
Routinely, but not at regular intervals			1 b	1 *	-----
Upon request or complaint only					-----
Provides laboratory service for testing safety of water from public supplies, adequacy of sewage treatment by public plants, and/or degree of stream pollution	1	1	1	1 *	1 *
Licenses or certifies operators of public water systems and sewage treatment plants					-----
Approves plans for installations of water supplies and sewage disposal facilities of semipublic places (camps, industries, schools, other institutions, etc.)	1		1	1	-----
Inspects semipublic water supplies and sewage disposal facilities—					
Periodically	1 *	1 b	1 b	1	1 *
Routinely, but not at regular intervals	1 b	1 b	1 b	1	1 b
Upon request or complaint only					-----
Makes laboratory tests of water samples from semipublic supplies	1	1	1	1	1 *
Condemns and closes to use unsatisfactory semipublic supplies	1	1	1	1	-----

See Code at end of table.

TABLE 2.—*Department of State government responsible for specific activities designed to control sanitation of water supplies and sewerage systems in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory				
	Wyoming	Alaska	Hawaii	Puerto Rico	Virgin Islands
Operates a direct service program—Continued.					
Inspects private water supplies and sewage disposal facilities—					
Periodically.					
Routinely, but not at regular intervals.					
Upon request or complaint only.	1	1	1	1	1
Makes laboratory tests of water samples from private supplies.	1 ^k	1 ^k	1 ^k		1 ^k
Engages in activities to control stream pollution from—					
Municipal sewage.	1	1 ^j	1	1	
Mine drainage.	1	1			
Industrial waste.	1	1 ^j	1	1	
Other and/or unspecified sewage or waste.		1 ^j	1	1	
Furnishes direct advisory service to individuals, corporations, and municipalities as to construction and maintenance of most suitable type of water supply or sewerage system.	1	1	1	1	
Renders additional service not covered in this classification.	1	1	1	1	

*Code:

1. Department of health
2. Department of agriculture
3. Department of labor, labor and industry, labor and statistics, industrial commission, etc.
4. Department of education, public instruction, etc.
5. Independent State laboratory, State laboratory department
6. State university or college
7. Independent department of engineering, department of public utilities, department of public service.
8. State water commission, State water board, stream control commission, sanitary water board, State sanitary authority, committee of water pollution, interstate stream commission, etc.
9. Other departments or offices of State government

* The department of health is really a division (Idaho) and bureau (Maine) of public health, subordinate to the department of public welfare (Idaho) and the department of health and welfare (Maine).

^b Sewage disposal facilities only.

^d Under special conditions only: When water supplies are endangered, when stream pollution is involved, when cross connections are concerned, when nuisances are created, when shellfish-producing waters are involved, in case of actual or threatened disease, if more than a specified number of persons is served, in the absence of local service, and/or if municipal facilities are privately owned.

* For general sanitation activities, but not for W. P. A. community sanitation projects.

^f As part of grant-in-aid to local health units for general health work.

^g Not required, but a voluntary activity; no regulatory authority, but promotional and advisory activity.

^h For selected types of facilities only: Tourist and/or C. C. C. camps, roadside supplies, dairy farms, institutions, schools, industries, new plants, approved facilities, and/or other selected types or groups of facilities.

ⁱ Service provided, but on a fee basis.

^j Laboratory of the State health department makes only bacteriological examinations; chemical analyses, which are required quarterly, must be made by private chemists.

^k Upon request or complaint; occasionally; for special studies; and/or for verification of local findings.

^l Has authority, but little or no activity carried on.

Sanitation of semipublic water and sewerage systems usually falls within the scope of State authority also, but the health department is less apt to have full regulatory power over semipublic facilities than over those classified as public, or municipal. Not only do special sanitary commissions or water boards and the independent department of engineering which have already been referred to share responsibility for control of semipublic sewerage systems, but nine departments of education participate in regulation of school sanitation and as many departments of labor promulgate and/or enforce regulations pertaining to sanitation within industrial establishments.

Nevertheless, this amount of split control does not alter the fact that the health department maintains the leading regulatory position with respect to sanitation of water and sewerage facilities of schools, industries, hospitals and other institutions, camps, roadside parks, and the like. In some States, authority over semipublic facilities does not include both the water supply and the sewerage system but is limited to one or the other. Furthermore, State intervention may be restricted to special conditions such as the endangering of public water supplies, creation of a nuisance, involvement of stream pollution, or service affecting more than a specified number of persons. From table 2 may be determined the States and the agencies which have limited and broad regulatory authority over the several types of semipublic facilities.

Relatively little State regulatory control is maintained over the water supplies and sewage disposal facilities of private premises. Actually, less than one-third of the States routinely have such control over both types of facilities. Conversely, 10 States report no regulation whatever; in 21, the regulatory function as applied to private premises is limited to methods of sewage disposal; and in 5, State regulation applies to special conditions only.

All State health departments having local counterparts engage in promotional activities for extension of sanitation services at that level. Stimulation of local endeavors is accomplished largely through furnishing supervision and advice to sanitation personnel affiliated with the local health organizations. This is a particularly important function of the State health department engineers. Direct promotional and educational measures which members of the State staff rely upon as effective approaches to the problem of sanitation fall into two distinct categories. One type of educational activity is designed for the general public, while the other includes more specialized instruction for operators of water systems and sewage treatment plants. Conferences with local officials, lectures before service clubs and citizens' associations, and distribution of pertinent literature are the means usually selected for securing installation of new or extension of old facilities. Furnishing suggestions, assistance, and cooperation in the development of new public water supplies and sewerage facilities also constitutes a major health department function.

The general promotional and educational efforts of State health departments are not limited to facilities classified as public. In rural areas public installations are impossible or impractical and individual facilities must be maintained. To meet such needs, the health department circulates standards and specifications which are recommended for springs, wells, and surface water supply systems as well as corresponding information regarding installation of septic tanks or sanitary privies for use on semipublic or private premises. One of

the outstanding promotional enterprises of State health departments is sponsorship of community sanitation projects conducted by the Federal Work Projects Administration and including construction and repair of privies, septic tanks, and wells. Such sponsorship entails defining the work proposed, outlining procedures to be followed, securing orders, determining personnel required, estimating total and unit costs, and attending to such other details as might be necessary for securing approval by the Work Projects Administration. In other words, the State health department is the motivating force behind the cooperating agency which renders the actual direct service.

The functioning of water and sewage treatment plants cannot be considered either satisfactory or safe unless competent personnel are employed for their operation. Nevertheless, only about one-fifth of the State health departments have any control—through licensing, certification, or establishment of standards of training—over the qualifications of persons serving in this capacity. Consequently, the knowledge and ability of plant operators varies considerably according to differences in requirements set up by the individual cities. In an effort to level off these inequalities, about four-fifths of the State health departments have undertaken some sort of in-service training for operators of water and sewage treatment plants who may be inadequately prepared for their task. Such training may be restricted to personal instruction given by engineers of the State health department at individual conferences which usually follow their periodic investigation of the plant operation, or it may be supplemented by short group courses conducted by the health department either independently or in cooperation with the State university. Attendance at these short courses is largely on a voluntary basis. Other types of in-service training sponsored by several States each are regional conferences, traveling schools held at selected points throughout the State, home study courses, and apprenticeship training.

No financial grants-in-aid are made to local health units specifically for water and sewerage activities; yet almost without exception some portion of the allotment made by a State health department to local units for general health work is expended for salaries of local engineers or sanitarians, who, in turn, are directly working for improvement of existing water and sewerage systems and for installation of additional new systems.

Direct service rendered by State agencies for water safety and proper sewage disposal, as well as regulatory control exercised over these features, varies according to the several types of facilities. Activities classified as direct State service for municipal systems may be described according to one or a combination of the following categories: (1), Technical review and approval of source of public water supplies and of construction plans for installation and extension of public water and

sewage treatment plants and systems; (2), inspection of plant operation; (3), laboratory testing of samples to determine safety of water and adequacy of sewage treatment; and (4), licensing or certification of plant operators. For the most part, the health department is the direct service agent of the State, but all branches of service are not performed with the same degree of uniformity.

Since the safety of public water supplies and sewage treatment is dependent upon provision of special structures, mechanical equipment, and treatment chemicals, staff engineers of all but 10 State health departments routinely examine in detail plans for both water and sewage treatment plants and systems prior to their installation or extension. Two more health departments render such service for municipal sewage disposal facilities only and 1, for water supplies only; 4 do not require that engineering plans and specifications be submitted for review, but make complete checks when they are voluntarily presented. In 3 States, the sanitary water board, State water commission, or similar organization supplements health department service in review and approval of plans for sewer systems and treatment plants, while an independent department of engineering and a department of public utilities function in this capacity in 1 State each.

Periodic inspectional service provided by the State agencies for municipal water and sewerage facilities ranges from weekly to biennial visits, with more than one-fourth of the States reporting that investigations of both types of facilities are made routinely, but at irregular intervals. Source material collected in connection with this survey does not reveal specific items covered in the inspections made by State engineers, but suggests that details of such investigations vary in accordance with complexity of the system or treatment plant under observation.

Practically all States provide laboratory service for checking the safety of water from public supplies. This is usually a health department performance, but in a few States maintenance of the public health laboratory is a joint function of the health department and State university or college. In two more jurisdictions an independent State laboratory affords facilities for testing the safety of water samples from municipal systems. Laboratory testing of the adequacy of sewage treatment is less uniformly practiced by State agencies, inasmuch as a fourth of the States report the absence of such service. It should be noted that three of the States which test municipal water and sewage samples do so only on a fee basis. In the remaining States listed such service is free.

Licensing of plant operators is a form of direct service which is very closely allied with the regulatory function of the agency. Although a few State health departments have initiated licensing sys-

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tems through a voluntary certification plan, in the majority of States this procedure is carried out in accordance with specific statutory requirements.

While the types of direct service afforded semipublic water supplies and sewage disposal systems by State agencies are similar to those provided public facilities, the extent of such service varies markedly for the two classes of installations. The semipublic group, it will be recalled, includes camps, roadside recreation parks, comfort stations, schools, industries, hospitals, or other like institutions not connected with a public water supply or sewer system. As a rule, such water supplies are obtained from untreated springs or wells, and septic tanks are used as the means of sewage disposal. Twenty-two States report routine review and approval of construction plans for all kinds of semipublic water or sewerage systems. In 13 additional areas, such service is available for particular kinds of semipublic places only. For instance, one health department may check all school specifications, whereas another may concentrate on the water and sewerage of tourist camps. Still another variation of this branch of service is that rendered when plans for semipublic places are submitted voluntarily. Reports of nearly one-fourth of the jurisdictions indicate that no action whatever is taken from the State level upon plans for proposed semipublic water and sewerage installations.

Inspections of semipublic facilities by State personnel are rarely made at stated intervals even in those States which report inclusion of such service as an item of their programs. Irregular inspectional schedules predominate and investigation of semipublic facilities upon request or complaint only is not uncommon. It should be emphasized that absence of periodic State inspectional service does not necessarily imply that no supervision is extended over the water and sewerage of places maintaining their own facilities, but serving groups of people. In general, it is the policy of State health departments to delegate most of such activity to their local subdivisions, thus conserving the time and energies of the State staff for handling municipal problems and especially troublesome semipublic situations. Where there are not organized local health units, however, any supervision which is maintained over semipublic accommodations must necessarily emanate from the State agency.

With one important difference, circumstances under which State laboratory facilities are available for testing water samples from semipublic supplies are much the same as those described for samples collected from municipal sources. The difference referred to occurs in seven States which do not routinely test samples from semipublic supplies, but render such service upon request only. Condemnation of unsatisfactory semipublic supplies and subsequent closing thereof is a practice resorted to by about two-thirds of the health departments.

Practically all direct service pertaining to water supplies and sewage disposal facilities of private premises which is supplied by State personnel to individual families is furnished on a request basis. While both inspectional and laboratory service are included in these requests, direct advisory service consisting primarily of recommended standards and specifications constitute by far the greatest bulk of aid given by State health departments for facilities of private premises. Such direct advisory service is not to be confused with the advisory and supervisory function discussed earlier in this report. The previous item applied to the relationship between State and local engineering personnel rather than to specific advice given individuals regarding the most suitable type of water supply or sewerage system.

Probably the most notable mass effort of State health departments for improvement of environmental sanitation of private premises is their joint participation with the Federal Work Projects Administration and organized local health units in extensive privy construction programs. A few States have expanded this activity to include construction of septic tanks and repair of wells. The actual role of the State health agency in these projects is usually defined as development, promotion, and supervision. Over three-fourths of the health departments reported such participation. Northeastern States are less apt to engage in community sanitation programs of this type than are States of any other section of the country. About two-fifths of the health departments reported a cooperative arrangement with Federal loan agencies whereby the health department approves the water supply and sewage disposal facilities on private properties for which Federal loans are sought.

Additional activities which are closely related to the main problems of water supply and sewage disposal and which are carried on to a varying extent by engineers of the several State health departments include certification of the drinking water used on common carriers and control of the sale of bottled water and water used as a source of ice supplies.

From the foregoing discussion, it is obvious that there is a definite pattern to State activities for safety of water supplies and sewage disposal facilities, not only with respect to content of the program but also from the standpoint of the agency primarily responsible and the types of auxiliary agencies which participate in special features of the complete control plan. That considerable variation obtains among the States in extent and intensity of service is recognized; yet it is significant that in this field of public health endeavor some agreement has been reached as to effective control methods and scope of State responsibility.

PLAQUE INFECTION REPORTED IN THE UNITED STATES DURING 1941

IN HUMAN BEINGS

Two fatal cases of plague in human beings were reported in the United States in 1941, both in Siskiyou County, California. The first case occurred in a 10-year-old boy, residing near Montague, with onset on June 14 and death on June 26. The diagnosis was confirmed bacteriologically. The second case occurred in a 5-year-old boy living 1 mile northwest of Mount Shasta City, about 50 miles from the locality in which the other case occurred. The diagnosis was confirmed by animal inoculation and the isolation of pure cultures.

The source of infection in each case was believed to have been ground squirrels; and the distance between the two localities in which the cases occurred indicated widespread rodent infection in the area. This was subsequently proved to be the case by the finding of plague infection in pools of fleas taken from ground squirrels in various localities in Siskiyou County.

IN RODENTS AND PARASITES

Plague infection in rats, wild rodents, and parasites from rodents was reported during 1941 in 8 western States—California, Colorado, Idaho, Montana, New Mexico, North Dakota, Oregon, and Washington. It was found for the first time in North Dakota. On July 12, 1941, the infection was proved in fleas collected on June 23 from ground squirrels (*C. richardsonii*) shot in a locality about 7 miles northeast of Crosby, Divide County, and about 6 miles south of the Saskatchewan-North Dakota boundary. It is believed that this locality is the farthest east in which plague infection has been found in wild rodents or their ectoparasites in the United States. The farthest east where the infection had previously been proved to be present was Dona Ana County, New Mexico, where an infected kangaroo rat was found in 1939.

Infected rats and infected fleas from rats were found in San Francisco and Richmond, Contra Costa County, California, during the year.

The accompanying table lists the areas in which plague infection was reported to the Public Health Service during 1941. It is not to be inferred that these reports give the complete picture of the presence of the infection among wild rodents in the Western States, as the field forces engaged in the work, the areas included in the investigations, and the seasonal periods during which the work is undertaken are limited. They do, however, demonstrate the continuance of a wide distribution and an expanding area of proved foci.

The presence of infection in animal tissue or parasites was demonstrated by laboratory examination, inoculation of laboratory animals

with tissue from rodents, and mass inoculation with emulsion of parasites.

Plague infection in wild rodents and their ectoparasites as reported to the Public Health Service during 1941

State and county	Date ¹	Infection found in—
California:		
Alameda County.....	July 2	2 pools of fleas from rats (<i>R. norvegicus</i>), in Berkeley and Oakland.
Contra Costa County.....	May 13	Tissue from 2 rats (<i>R. norvegicus</i>) taken on garbage dump in Richmond.
Do.....	June 24	Pool of fleas from 68 rats taken on garbage dump in Richmond.
Kern County.....	May 7	Tissue from 2 ground squirrels (<i>C. beecheyi</i>).
Do.....	May 16	Tissue from ground squirrel (<i>C. beecheyi</i>) and 3 pools of fleas from ground squirrels.
Do.....	May 24	3 pools of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	May 29	Pool of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	June 3	2 pools of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	June 11	Pool of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	June 18	Pool of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	June 20	Tissue from ground squirrel (<i>C. beecheyi</i>).
Do.....	June 26	Pool of fleas from ground squirrel burrows; 2 pools of fleas from ground squirrels (<i>C. beecheyi</i>). Ground squirrel.
Do.....	June 30	2 pools of fleas from ground squirrels 6 miles from Davis Ranger Station and ground squirrel from Keene (all squirrels <i>C. beecheyi</i>).
Do.....	July 2	Pool of fleas from 1 ground squirrel found dead 3 miles south of Davis Ranger Station; in ground squirrel from ranch 6 miles south of Davis Ranger Station.
Do.....	July 5	2 pools of fleas from ground squirrels taken 2 and 6 miles south of Davis Ranger Station; 3 ground squirrels, pool of 36 ticks
Do.....	July 9	3 ground squirrels and pool of fleas from ground squirrels taken near Keene.
Do.....	July 12	2 ground squirrels and 3 pools of fleas from ground squirrels taken near Keene.
Do.....	July 18	2 ground squirrels and 3 pools of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	July 24	Pool of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	Aug. 26	Pool of fleas from ground squirrels (<i>C. beecheyi</i>).
Do.....	Nov. 17	Tissue from ground squirrels (<i>C. fisheri</i>).
Los Angeles County.....	June 26	Pool of fleas from ground squirrel (<i>C. beecheyi</i>) from Gorman dump, $\frac{1}{2}$ mile east of Gorman.
Monterey County.....	May 16	Pool of fleas from ground squirrels from Hunter Liggett Military Reservation, 25 miles southwest of King City.
Do.....	June 30	7 ground squirrels from Hunter Liggett Military Reservation.
Do.....	July 2	Pool of fleas from Hunter Liggett Military Reservation.
Do.....	July 5	3 pools of fleas from Hunter Liggett Military Reservation and pool of fleas from ranch 6 miles west of Jolon.
San Bernardino County.....	Sept. 17	Pool of fleas and pool of lice (approximately 500) from 1 golden mantled ground squirrel.
San Francisco (city and county).....	June 3	Pool of fleas from 2 rats (<i>R. norvegicus</i>) caught in the vicinity of the 1200 block of Folsom St., San Francisco.
Do.....	June 24	A rat (<i>R. norvegicus</i>) trapped at 1740 Kirkwood Ave., San Francisco.
Santa Cruz County.....	July 9	Pool of fleas from ground squirrels taken 6 miles east of Watsonville.
Shasta County.....	Dec. 2	2 pools of fleas from ground squirrels (<i>C. douglasii</i>).
Do.....	Dec. 31	Pool of fleas from ground squirrels (<i>C. douglasii</i>) and <i>C. lateralis</i> sp.).
Siskiyou County.....	July 24	2 pools of fleas from ground squirrels (<i>C. douglasii</i>).
Do.....	Aug. 8	2 pools of fleas from ground squirrels (<i>C. douglasii</i>) and pool of fleas from burrows.
Do.....	Aug. 19	Tissue from ground squirrel (<i>C. douglasii</i>) and pool of fleas from ground squirrels (same sp.).
Do.....	Aug. 26	3 pools of fleas from ground squirrels (<i>C. douglasii</i>).
Do.....	Sept. 4	Tissue from ground squirrel (<i>C. douglasii</i>) and 2 pools of fleas from ground squirrels (same sp.).
Do.....	Sept. 17	Tissue from 1 ground squirrel (sp. unknown) found dead, and 1 ground squirrel (<i>C. douglasii</i>) and 2 pools of fleas from same sp.
Do.....	Sept. 29	3 pools of fleas from ground squirrels (<i>C. douglasii</i>).
Do.....	Sept. 30	Tissue from ground squirrel (<i>C. douglasii</i>).
Do.....	Oct. 16	Pool of fleas from chipmunks and 3 pools of fleas from ground squirrels (<i>C. douglasii</i>).
Do.....	Oct. 22	Pool of fleas from ground squirrels (<i>C. douglasii</i>).
Do.....	Nov. 17	Pool of fleas from ground squirrels (<i>C. douglasii</i>).
Do.....	Dec. 2	2 pools of fleas from ground squirrels (<i>C. douglasii</i>).

¹ Date of reports that infection had been proved.

Plague infection in wild rodents and their ectoparasites as reported to the Public Health Service during 1941—Continued

State and county	Date	Infection found in—
Colorado:		
San Miguel County.....	July 29	Tissue from ground squirrel (<i>C. variegatus grammurus</i>); tissue from 2 marmots (<i>Marmota flaviventris</i>); pool of fleas from 8 marmots.
Idaho:		
Canyon County.....	May 23	Pool of fleas from ground squirrels.
Payette County.....	May 23	Pool of fleas from ground squirrels.
Ada County.....	June 3	2 pools of fleas from ground squirrels (<i>C. mollis</i> sp.).
Montana:		
Beaverhead County.....	July 23	Pool of fleas from ground squirrels (<i>C. columbianus</i>).
Do.....	July 29	Pool of fleas from ground squirrels (<i>C. columbianus</i>).
Ravalli County.....	Aug. 4	Tissue from 2 ground squirrels.
New Mexico:		
Valencia County.....	Sept. 20	2 pools of fleas from prairie dogs (<i>Cynomys gunnisoni zuniensis</i>).
North Dakota:		
Divide County.....	July 12	Fleas from ground squirrels (<i>C. richardsonii</i>) shot in a locality about 7 miles northeast of Crosby and about 6 miles south of Canadian border.
Do.....	July 29	3 pools of fleas from ground squirrels (<i>C. richardsonii</i>).
Oregon:		
Malheur County.....	June 3	Pool of fleas from 1 marmot (<i>Marmota flaviventris avara</i>).
Harney County.....	Aug. 14	Tissue from ground squirrel (<i>C. oregonus</i>).
Washington:		
Stevens County.....	July 29	Tissue from ground squirrel (<i>C. columbianus</i>) and pool of fleas from ground squirrels.

PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

April 26—May 23, 1942

The accompanying table summarizes the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the PUBLIC HEALTH REPORTS under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4-week period ended May 23, 1942, the number reported for the corresponding period in 1941, and the median number for the years 1937-41.

DISEASES ABOVE MEDIAN PREVALENCE

Measles.—For the four weeks ended May 23 there were 93,056 cases of measles reported, as compared with 172,184, 44,682 and 61,913 reported cases for the corresponding period in 1941, 1940 and 1939, respectively. While the number of cases was only about 55 percent of last year's figure for this period, it was almost one and one-half times the 1937-41 median incidence, which is represented by the 1939 figure. In the Middle Atlantic, South Atlantic and East South Central regions the disease was considerably less prevalent than it was at this time last year and the numbers of cases were also well below the normal seasonal expectancy, but in all other regions the disease was unusually prevalent, the excesses over the normal seasonal incidence ranging from 20 percent in the East North Central region to more than 7 times the 1937-41 median in the Pacific region.

Meningococcus meningitis.—For the current 4-week period there were 336 cases of meningococcus meningitis reported—the highest number recorded for this period of the year since 1937, when 504 cases were reported for the period corresponding to the current one. The excesses were reported from widely scattered regions, the Atlantic Coast, West South Central and Pacific, and was confined largely to certain States in the regions. Of the total cases, New York reported 71, Maryland 27, Massachusetts 25, Texas 19, California 17, Virginia 16, and New Jersey 16 cases. While the current incidence is considerably above that of recent years, it represents a decline from the preceding 4-week period when 390 cases were reported, which figure will probably represent the highest seasonal incidence as a further decline in cases may be expected during the summer months.

Poliomyelitis.—The poliomyelitis situation was most favorable during the current 4-week period. The number of cases (73) was only slightly above the incidence in 1941, which figure (70 cases) also represents the 1937-41 median incidence for this period. An increase of this disease normally occurs at this season of the year. The current figure represented about a 40-percent increase over the preceding 4-week period, but there was no indication of any unexpected increase in any section.

DISEASES BELOW MEDIAN PREVALENCE

Diphtheria.—The incidence of diphtheria (757 cases) reported for the four weeks ended May 23 was less than 90 percent of the incidence during the corresponding period in 1941 and only about 60 percent of the 1937-41 median incidence for this period. In the West South Central region the number of cases stood at about the normal seasonal level but in all other regions the incidence was relatively low.

Influenza.—The number of cases of influenza reported for the country as a whole was also comparatively low, approximately 5,200 cases being reported, as compared with 7,530 cases for this period in 1941, and an average of 5,650 cases in the years 1937-41. All regions except the West South Central and Mountain regions reported a relatively low incidence; in the former region the number of cases was about normal for this season of the year, while in the latter region, the incidence was about 75 percent above the average seasonal incidence.

Scarlet fever.—For the four weeks ended May 23 there were 11,551 cases of scarlet fever reported, as compared with approximately 13,880, 19,800, and 16,000 cases for the corresponding period in 1941, 1940, and 1939, respectively. The incidence was slightly higher in the New England States than might be expected, but in all other regions the numbers of cases were lower than the 1937-41 average figures for this period. For the country as a whole the current incidence was the lowest on record for this period of the year.

Smallpox.—The number of cases of smallpox remained at an unusually low level, the 75 cases reported for the current period being only about 35 percent of the low incidence reported in 1941 (218 cases) and less than 7 percent of the 1937-41 median figure for this period. However, one case was reported from New Hampshire during the week ended May 16, which is the first case of this disease reported from the New England region since July 1939, when 6 cases were reported from Connecticut.

Typhoid fever.—A few more cases of typhoid fever occurred during the current period than were reported for the corresponding period in 1941, but the number (384) was only about 75 percent of the 1937-41 average incidence for this period. The 108 cases occurring in the South Atlantic region represented an increase of approximately 20 percent over the seasonal expectancy in that region, but in all other regions the incidence was relatively low.

Whooping cough.—This disease was also considerably less prevalent during the current period than it was at this time in 1941, approximately 15,000 cases being reported, as compared with approximately 21,000 last year; the number of cases was also about 10 percent below the preceding 4-year average incidence.

MORTALITY, ALL CAUSES

The average mortality rate from all causes in large cities for the four weeks ended May 23, based on data received from the Bureau of the Census, was 11.5 per 1,000 inhabitants (annual basis). The rate was about 20 percent above that for the corresponding period in 1941, but it was slightly lower than the average rate (11.6) for the years 1939-41.

Number of reported cases of 9 communicable diseases in the United States during the 4-week period Apr. 26-May 23, 1942, the number for the corresponding period in 1941, and the median number of cases reported for the corresponding period, 1937-41

Division *	Current period	1941	5-year median	Current period	1941	5-year median	Current period	1941	5-year median
Diphtheria									
Influenza ¹									
Measles ²									
United States.....	757	856	1,221	5,196	7,530	5,650	93,056	172,184	61,913
New England.....	27	26	31	5	14	15	9,578	6,623	5,193
Middle Atlantic.....	112	140	242	41	81	81	12,447	54,701	19,646
East North Central.....	113	157	273	169	301	444	11,276	52,497	9,189
West North Central.....	73	77	84	93	118	142	9,969	7,336	5,269
South Atlantic.....	118	147	177	1,577	2,751	2,012	7,852	27,077	9,119
East South Central.....	64	68	81	374	343	517	1,635	9,174	6,204
West South Central.....	158	119	159	1,850	2,701	1,842	6,894	7,589	4,094
Mountain.....	46	58	58	797	476	453	8,311	4,324	3,956
Pacific.....	46	64	111	290	745	376	25,094	2,863	3,451
Meningococcus meningitis									
Poliomyelitis									
Scarlet fever									
United States.....	336	181	181	73	70	70	11,551	13,832	18,074
New England.....	48	11	11	3	0	1	1,458	1,206	1,206
Middle Atlantic.....	97	38	44	8	8	6	3,802	4,590	5,371
East North Central.....	12	22	22	8	6	8	3,208	4,189	6,236
West North Central.....	11	9	14	4	1	3	1,041	1,141	1,445
South Atlantic.....	74	45	45	20	16	16	708	718	725
East South Central.....	25	32	32	13	11	9	372	714	411
West South Central.....	34	14	19	11	11	11	174	337	337
Mountain.....	4	2	5	2	5	3	262	335	454
Pacific.....	31	8	8	4	12	14	526	602	862
Smallpox									
Typhoid and para-typhoid fever									
Whooping cough ³									
United States.....	75	218	1,142	384	377	514	15,291	21,484	16,819
New England.....	1	0	0	14	27	20	1,632	1,605	1,478
Middle Atlantic.....	0	0	0	51	56	59	4,149	3,100	3,353
East North Central.....	12	59	226	49	38	71	3,615	4,175	3,160
West North Central.....	9	84	440	19	14	23	475	1,749	895
South Atlantic.....	8	10	7	108	91	91	1,596	3,225	2,791
East South Central.....	14	15	28	42	55	54	680	836	681
West South Central.....	27	14	61	75	53	119	998	1,661	1,642
Mountain.....	1	8	59	9	18	30	513	1,543	1,075
Pacific.....	3	28	98	17	25	32	1,633	3,590	2,421

¹ Mississippi, New York, and Pennsylvania excluded; New York City included.

² Mississippi excluded.

³ Four years only (1938-41).

DEATHS DURING WEEK ENDED MAY 30, 1942

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended May 30, 1942	Corresponding week, 1941
Data from 87 large cities of the United States:		
Total deaths.....	7,843	7,729
Average for 3 prior years.....	7,734	
Total deaths, first 21 weeks of year.....	184,539	187,920
Deaths per 1,000 population, first 21 weeks of year, annual rate.....	12.4	12.6
Deaths under 1 year of age.....	535	469
Average for 3 prior years.....	472	
Deaths under 1 year of age, first 21 weeks of year.....	11,784	10,949
Data from industrial insurance companies:		
Policies in force.....	64,981,793	64,478,825
Number of death claims.....	11,135	9,717
Death claims per 1,000 policies in force, annual rate.....	8.9	7.9
Death claims per 1,000 policies, first 21 weeks of year, annual rate.....	10.0	10.4

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JUNE 6, 1942

Summary

Each of the nine common communicable diseases included in the following weekly table continued at a favorably low incidence during the current week. As for several weeks past, three of these diseases—*influenza, measles, and meningococcus meningitis*—are above the 5-year (1937–41) median expectancy, but the incidence of none of these diseases is high.

As compared with the preceding week the number of cases of *meningococcus meningitis* declined from 81 to 68 (5-year median, 49), and of *poliomyelitis* from 19 to 17 (5-year median, 36). The number of *smallpox* cases increased from 34 to 36, but the current incidence is below that for the corresponding period of any prior year. Illinois reported 8 cases, Arkansas 7, and Wisconsin 5.

Of 21 cases of *Rocky Mountain spotted fever*, 9 cases were reported in the Mountain States, and of 35 cases of *endemic typhus fever*, 10 cases occurred in Texas, 7 in Georgia, and 6 in Alabama. Two cases were reported in New York.

Other diseases reported during the week include 1 case of *leprosy* in Texas and 1 case in California, 9 cases of *amebic*, 200 cases of *bacillary*, and 89 cases of *unspecified dysentery*, and 13 cases of *tularemia*.

The death rate for 88 large cities in the United States for the current week is 11.4 per 1,000 population, as compared with 11.0 for the preceding week and a 3-year (1939–41) average of 11.3. The cumulative rate to date (first 22 weeks) is 12.3 as compared with 12.5 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended June 6, 1942, and comparison with corresponding week of 1941 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Telegraphic morbidity reports from State health officers for the week ended June 6, 1942, and comparison with corresponding week of 1941 and 5-year median—Continued.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median 1937-41	Week ended—		Median 1937-41	Week ended—		Median 1937-41	Week ended—		Median 1937-41
	June 6, 1942	June 7, 1941		June 6, 1942	June 7, 1941		June 6, 1942	June 7, 1941		June 6, 1942	June 7, 1941	
NEW ENG.												
Maine.....	1	0	0	4	3	4	0	0	0	0	0	1
New Hampshire.....	0	1	0	28	0	5	0	0	0	1	0	0
Vermont.....	0	0	0	19	5	6	0	0	0	0	0	0
Massachusetts.....	0	1	1	244	166	166	0	0	0	2	5	1
Rhode Island.....	0	0	0	9	9	9	0	0	0	0	0	0
Connecticut.....	0	1	0	10	35	39	0	0	0	0	1	1
MID. ATL.												
New York.....	0	3	3	267	411	519	0	0	0	5	7	7
New Jersey.....	0	0	0	107	173	131	0	0	0	0	2	2
Pennsylvania.....	0	1	0	234	297	292	0	0	0	11	6	7
E. NO. CEN.												
Ohio.....	0	0	0	211	229	235	1	1	2	1	6	6
Indiana.....	0	0	0	44	42	75	1	1	22	3	0	1
Illinois.....	1	3	2	142	180	320	8	12	12	3	5	5
Michigan ¹	0	0	0	38	125	262	0	5	2	0	1	3
Wisconsin.....	1	2	1	111	79	103	5	1	2	0	1	1
W. NO. CEN.												
Minnesota.....	3	0	0	35	40	70	0	0	16	1	3	1
Iowa.....	0	0	0	26	7	45	0	0	21	1	0	0
Missouri.....	0	0	0	43	55	55	1	0	28	6	2	2
North Dakota.....	0	0	0	16	0	4	0	0	0	2	1	1
South Dakota.....	0	1	0	15	1	15	0	0	2	0	0	0
Nebraska.....	0	0	0	13	6	13	0	0	1	0	0	0
Kansas.....	0	0	0	42	27	38	0	0	6	0	1	1
SO. ATL.												
Delaware.....	0	0	0	14	17	3	0	0	0	0	1	0
Maryland ²	1	1	0	67	36	30	0	0	0	4	1	2
Dist. of Col.....	0	0	0	4	8	8	0	0	0	1	0	1
Virginia.....	0	0	0	15	19	19	0	0	0	1	7	6
West Virginia.....	0	0	0	17	18	21	1	0	0	3	2	3
North Carolina.....	0	0	1	16	24	14	0	0	0	2	3	3
South Carolina.....	0	1	1	1	3	5	1	1	0	4	3	3
Georgia.....	0	1	1	12	9	6	0	0	0	15	9	9
Florida.....	0	3	1	2	1	1	0	0	3	3	12	2
E. SO. CEN.												
Kentucky.....	1	1	1	25	41	35	0	3	1	2	4	5
Tennessee.....	0	0	0	27	40	32	3	2	2	4	4	4
Alabama.....	3	1	1	16	12	8	1	1	0	2	2	3
Mississippi ²	0	0	0	5	3	2	0	2	0	6	2	3
W. SO. CEN.												
Arkansas.....	0	0	0	4	1	2	7	1	2	5	5	10
Louisiana.....	0	0	1	5	4	4	4	1	0	15	3	10
Oklahoma.....	0	2	0	11	7	10	0	5	8	1	3	7
Texas.....	3	0	0	35	21	30	0	0	5	11	11	13
MOUNTAIN												
Montana.....	0	0	0	11	11	12	0	0	2	0	0	0
Idaho.....	0	0	0	2	7	6	0	1	0	0	1	1
Wyoming.....	0	0	0	11	2	4	0	0	0	1	0	0
Colorado.....	0	1	0	29	21	30	3	0	4	2	0	1
New Mexico.....	0	0	0	2	0	9	0	0	0	0	2	1
Arizona.....	0	0	0	4	6	5	0	0	0	0	1	1
Utah ¹	0	0	0	9	6	8	0	0	0	0	0	0
Nevada.....	0	0	0	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington.....	1	0	0	22	19	23	0	2	2	1	0	1
Oregon.....	1	0	0	8	9	11	0	0	7	1	2	2
California.....	1	5	6	105	103	137	0	0	2	3	3	7
Total.....	17	29	36	2,137	2,338	3,099	36	42	242	123	124	192
22 weeks.....	453	495	495	78,950	78,846	103,808	507	1,000	6,750	1,823	1,871	2,606

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended June 6
1942—Continued

Division and State	Whooping cough		Week ended June 6, 1942							
	Week ended		Dysentery			Encephalitis, infectious	Leprosy	Rocky Mountain spotted fever	Tularemia	Typhus fever
	June 6, 1942	June 7, 1941	Anthrax	Amebic	Bacillary					
NEW ENG.										
Maine.....	31	14	0	0	0	0	0	0	0	0
New Hampshire.....	3	6	0	0	0	0	0	0	0	0
Vermont.....	63	7	0	0	0	0	0	0	0	0
Massachusetts.....	240	286	0	0	1	0	0	0	0	0
Rhode Island.....	19	27	0	0	0	0	0	0	0	0
Connecticut.....	91	58	0	0	0	0	1	0	0	0
MID. ATL.										
New York.....	381	359	0	2	3	0	0	0	0	2
New Jersey.....	420	122	0	0	0	0	1	0	0	0
Pennsylvania.....	233	330	0	0	0	0	1	0	1	0
E. NO. CEN.										
Ohio.....	131	325	0	0	0	0	0	0	0	0
Indiana.....	54	35	0	0	0	0	0	0	0	0
Illinois.....	268	102	0	1	0	0	0	3	0	0
Michigan ¹	130	318	0	0	0	0	0	0	0	0
Wisconsin.....	211	125	0	0	0	0	0	0	0	0
W. NO. CEN.										
Minnesota.....	31	87	0	1	0	0	1	0	0	1
Iowa.....	16	33	0	1	0	0	0	0	0	0
Missouri.....	18	53	0	0	0	0	1	0	0	0
North Dakota.....	6	28	0	0	0	0	2	0	0	0
South Dakota.....	2	5	0	0	0	0	1	0	0	0
Nebraska.....	13	11	0	0	0	0	0	0	0	0
Kansas.....	63	157	0	0	0	0	1	0	0	0
SO. ATL.										
Delaware.....	1	0	0	0	0	0	0	0	0	0
Maryland ²	50	108	0	0	0	1	0	2	0	0
Dist. of Col.....	21	11	0	0	0	0	0	0	0	0
Virginia.....	64	65	0	0	0	53	0	3	0	0
West Virginia.....	57	58	0	0	0	0	0	0	0	0
North Carolina.....	112	347	0	0	0	0	0	1	0	0
South Carolina.....	126	92	0	0	0	0	0	0	0	4
Georgia.....	62	27	0	1	20	0	0	1	3	7
Florida.....	9	7	0	0	0	0	0	0	0	3
E. SO. CEN.										
Kentucky.....	70	52	0	0	2	0	0	0	1	0
Tennessee.....	48	51	0	0	0	6	1	0	1	1
Alabama.....	53	55	0	0	0	0	1	0	0	6
Mississippi ¹	—	—	0	0	0	0	0	0	0	0
W. SO. CEN.										
Arkansas.....	17	60	0	0	2	0	0	0	0	0
Louisiana.....	4	4	0	0	1	0	0	0	2	2
Oklahoma.....	4	24	0	0	0	0	0	1	0	0
Texas.....	147	294	0	1	166	0	0	1	0	10
MOUNTAIN										
Montana.....	14	8	0	0	0	0	0	0	0	0
Idaho.....	3	17	0	0	0	0	0	0	0	0
Wyoming.....	3	12	0	0	0	0	0	4	3	0
Colorado.....	43	185	0	0	0	0	1	3	0	0
New Mexico.....	4	55	0	0	1	0	0	0	0	0
Arizona.....	14	40	0	0	0	28	0	0	0	0
Utah ¹	33	62	0	0	0	0	0	0	0	0
Nevada.....	6	15	0	0	0	0	0	2	0	0
PACIFIC										
Washington.....	41	123	0	0	0	0	0	0	0	0
Oregon.....	22	24	0	0	0	0	0	0	0	0
California.....	313	894	0	2	4	0	2	1	0	0
Total.....	3,765	5,176	0	9	200	89	13	2	21	13
22 weeks.....	84,303	103,062								35

¹ New York City only.² Period ended earlier than Saturday.

WEEKLY REPORTS FROM CITIES

City reports for week ended May 23, 1942

This table lists the reports from 90 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, Infectious, cases	Influenza	Measles, cases	Meningitis, meningo-encephalitis cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping-cough cases
			Case	Deaths							
Atlanta, Ga.	0	0	4	1	2	0	0	0	0	1	5
Baltimore, Md.	1	0	1	1	212	4	45	0	0	0	51
Barre, Vt.	0	0	0	0	0	0	0	0	0	0	10
Billings, Mont.	0	0	0	0	5	0	0	0	0	0	0
Birmingham, Ala.	0	0	7	0	2	0	1	0	3	0	3
Boise, Idaho.	0	0	0	0	18	0	0	0	0	0	0
Boston, Mass.	0	0	0	0	399	2	6	85	0	0	53
Bridgeport, Conn.	0	0	0	0	31	0	1	0	9	0	1
Brunswick, Ga.	0	0	0	0	4	0	2	0	0	0	0
Buffalo, N. Y.	0	0	0	0	21	0	9	0	6	0	7
Camden, N. J.	0	0	0	0	0	0	2	0	0	0	5
Charleston, S. C.	1	0	1	0	4	0	2	0	0	0	0
Charleston, W. Va.	0	0	0	0	0	0	0	0	0	0	0
Chicago, Ill.	13	0	1	0	48	0	26	0	74	0	113
Cincinnati, Ohio	0	0	2	1	3	0	0	1	18	0	8
Cleveland, Ohio	0	0	3	0	13	3	5	0	45	0	32
Columbus, Ohio	0	0	0	0	34	0	1	0	6	0	8
Concord, N. H.	0	0	0	0	0	0	2	0	0	0	0
Cumberland, Md.	0	0	0	0	0	0	0	0	0	0	0
Dallas, Tex.	0	0	1	1	15	0	4	0	3	0	1
Denver, Colo.	3	0	13	0	151	0	5	0	4	0	8
Detroit, Mich.	3	0	0	0	20	0	8	0	147	0	110
Duluth, Minn.	0	0	0	0	2	0	0	0	7	0	3
Fall River, Mass.	0	0	0	0	38	0	1	0	17	0	0
Fargo, N. Dak.	0	0	0	0	16	0	1	0	0	0	2
Flint, Mich.	0	0	0	0	0	0	2	0	1	0	3
Fort Wayne, Ind.	0	0	0	0	0	0	2	0	1	0	2
Frederick, Md.	0	0	0	0	0	0	0	0	0	0	0
Galveston, Tex.	0	0	0	0	5	0	3	0	0	0	6
Grand Rapids, Mich.	0	0	0	0	4	0	1	0	1	0	11
Great Falls, Mont.	0	0	0	0	31	0	2	0	0	0	1
Hartford, Conn.	1	0	1	0	148	0	2	0	4	0	16
Helena, Mont.	0	0	0	0	18	0	0	0	0	0	0
Houston, Tex.	1	0	0	0	13	0	2	0	0	1	2
Indianapolis, Ind.	0	0	0	0	131	0	6	0	6	0	22
Kansas City, Mo.	5	0	0	0	75	0	1	0	26	0	1
Kenosha, Wis.	0	0	0	0	13	0	1	0	1	0	15
Little Rock, Ark.	0	0	4	0	2	0	0	0	0	0	1
Los Angeles, Calif.	2	0	11	2	481	2	12	0	14	0	9
Lynchburg, Va.	0	0	0	0	0	0	2	0	0	0	41
Memphis, Tenn.	0	0	0	0	38	0	2	0	1	0	9
Milwaukee, Wis.	0	0	0	0	272	0	2	0	24	0	44
Minneapolis, Minn.	1	0	0	0	372	0	0	0	17	0	9
Missoula, Mont.	0	0	0	0	17	0	0	0	0	0	0
Mobile, Ala.	1	0	1	1	0	0	2	0	1	0	2
Nashville, Tenn.	0	0	1	1	3	0	2	0	0	0	0
Newark, N. J.	0	0	1	0	345	1	4	0	24	0	47
New Haven, Conn.	0	0	0	0	76	0	0	0	0	0	4
New Orleans, La.	1	0	2	2	23	1	3	0	4	0	3
New York, N. Y.	14	1	5	1	127	17	44	0	191	0	224
Omaha Neb.	0	0	0	0	103	0	1	0	4	0	0
Philadelphia, Pa.	1	1	1	1	54	0	7	0	121	0	97
Pittsburgh, Pa.	0	0	0	0	10	1	9	0	19	0	19
Portland, Me.	0	0	0	0	14	0	0	0	0	0	5
Providence, R. I.	0	0	0	0	178	0	4	0	9	0	45
Pueblo, Colo.	1	0	0	0	1	0	0	0	3	0	9
Racine, Wis.	0	0	0	0	275	0	0	0	8	0	22
Raleigh, N. C.	1	0	0	0	9	0	0	0	0	0	2
Reading, Pa.	0	0	0	0	3	0	1	0	1	0	8
Richmond, Va.	1	0	0	0	3	0	2	0	0	0	4

City reports for week ended May 23, 1942—Continued

	Diphtheria cases		Influenza		Measles, cases		Meningitis, meningococcus, cases		Pneumonia deaths		Polio myelitis cases		Scarlet fever cases		Smallpox cases		Typhoid and paratyphoid fever cases		Whooping cough cases	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Roanoke, Va.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rochester, N. Y.	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	5
Sacramento, Calif.	2	0	0	0	0	0	70	0	0	3	0	0	0	1	0	0	0	0	0	38
Saint Joseph, Mo.	1	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0
Saint Louis, Mo.	0	1	0	0	68	0	7	0	1	10	0	0	0	0	0	0	0	0	0	3
Saint Paul, Minn.	0	0	0	0	120	0	6	0	0	2	0	0	0	0	0	0	0	0	0	18
Salt Lake City, Utah.	0	0	0	1	368	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3
San Antonio, Tex.	0	0	0	0	19	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1
San Francisco, Calif.	1	0	0	0	291	0	7	0	0	5	0	0	0	0	0	0	0	0	0	0
Savannah, Ga.	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Seattle, Wash.	0	0	0	0	202	3	3	0	0	0	0	0	0	0	0	0	0	0	1	22
Shreveport, La.	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
South Bend, Ind.	0	0	0	0	5	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1
Spokane, Wash.	0	0	0	0	59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Springfield, Ill.	0	0	0	0	7	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Springfield, Mass.	1	0	0	0	79	0	5	0	0	10	0	0	0	0	0	0	0	0	0	7
Superior, Wis.	0	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Syracuse, N. Y.	0	0	0	0	447	1	2	0	0	1	0	0	0	2	0	0	0	0	0	23
Tacoma, Wash.	0	0	0	0	16	0	3	0	0	2	0	0	0	0	0	0	0	0	0	3
Tampa, Fla.	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Terre Haute, Ind.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Topeka, Kans.	0	0	0	0	15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Trenton, N. J.	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2
Washington, D. C.	2	0	1	0	97	2	7	0	0	12	0	0	0	0	0	0	0	0	0	9
Wheeling, W. Va.	0	0	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0
Wichita, Kans.	0	0	1	0	87	0	6	0	0	1	0	0	0	0	0	0	0	0	0	6
Wilmington, Del.	0	0	0	0	5	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0
Wilmington, N. C.	0	0	0	0	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	13
Winston-Salem, N. C.	0	0	0	0	9	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Worcester, Mass.	0	0	0	0	6	0	9	0	0	11	0	0	0	0	0	0	0	0	0	70

Anthrax.—Cases: Philadelphia, 1.*Dysentery, amebic*.—Cases: Baltimore, 1; New York, 3; Philadelphia, 1.*Dysentery, bacillary*.—Cases: Baltimore, 2; Hartford, 2; New York, 3.*Leprosy*.—Cases: New Orleans, 1.*Tularemia*.—Cases: Boise, 1; Philadelphia, 1.*Typhus fever*.—Cases: New Orleans, 1; Philadelphia, 1.

Rates (annual basis) per 100,000 population, for the group of 90 cities in the preceding table (estimated population, 1942, 34,134,198)

Period	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Typhoid fever cases	Whooping cough cases
		Cases	Deaths						
Week ended May 23, 1942	8.86	9.47	2.14	905.09	43.23	158.10	0.00	1.99	203.63
Average for week, 1937-41	14.20	10.50	4.01	1683.93	64.07	256.74	2.16	3.55	192.21

¹ Median.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended May 9, 1942.—During the week ended May 9, 1942, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis		3	3	5	7	1		1	3	28
Chickenpox		22		134	286	22	21	49	116	650
Diphtheria		17		17	2	2	1	3		42
Dysentery	5			2		1				8
German measles		1		20	63	4	9	13	26	135
Influenza		9				2			36	47
Lethargic encephalitis						1				1
Measles		2		476	160	142	14	16	25	835
Mumps	2	6		155	459	113	220	45	421	1,421
Pneumonia	8	12			19	3	1		13	56
Poliomyelitis			4							4
Scarlet fever	7	12	14	181	224	23	34	86	45	626
Trachoma							2			2
Tuberculosis	2	9	8	63	50		1	7	22	162
Typhoid and paratyphoid fever				13	1		3			17
Undulant fever				1	3	1	1		1	7
Whooping cough		20	2	147	111	8		19	75	382
Other communicable diseases	5	14		3	220	39	2	3	6	292

CUBA

Habana—Communicable diseases—4 weeks ended May 2, 1942.—During the 4 weeks ended May 2, 1942, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria	24		Rabies		1
Leprosy	1		Scarlet fever	1	
Malaria	16	2	Tuberculosis	5	2
Measles	26	1	Typhoid fever	81	8
Poliomyelitis	1				

Provinces—Notifiable diseases—4 weeks ended April 25, 1942.—During the 4 weeks ended April 25, 1942, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana ¹	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer	2	3	2	8		18	33
Chickenpox				3	3	12	18
Diphtheria		16		2	9	1	28
Hookworm disease	30						30
Leprosy	1			1	1	4	7
Malaria	36	17	1	1	4	439	498
Measles		24		2	1	1	28
Poliomyelitis		1				1	2
Rabies		1					1
Scarlet fever		1					1
Tuberculosis	12	164	12	51	23	33	295
Typhoid fever	8	89	9	42	7	20	175
Whooping cough			2				2
Yaws						1	1

¹ The city of Habana is also included.

PANAMA CANAL ZONE

Notifiable diseases—January–March 1942.—During the months of January, February, and March, 1942, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:

Disease	January		February		March	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox	8		14		10	
Diphtheria	16		7		11	
Dysentery (amebic)	12	1	9	2	6	3
Dysentery (bacillary)	10	10	6	3	6	5
Leprosy			1			
Malaria	460	10	386	6	366	4
Measles	302	6	90	1	82	
Meningococcus meningitis	3	1	2		1	
Mumps	3		4		2	
Paratyphoid fever			1		1	
Pneumonia	165	35	136	24	138	19
Relapsing fever					2	
Tuberculosis	110	47	16	37	17	30
Typhoid fever	4		3		1	
Typhus fever	1				1	
Whooping cough	116	3			12	

¹ In the Canal Zone only.

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual prevalence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

Plague

China.—Plague has been reported in China as follows: Chekiang Province, April 1–10, 1942, 4 cases; Fukien Province, Jan. 1–Apr. 5, 1942, plague appeared in 11 localities; Hunan Province, week ended April 18, 1942, 2 cases; Suiyan Province, pneumonic plague appeared in epidemic form during the period Jan. 1–Apr. 4, in the north-western area.

Peru.—During the period April 1–30, 1942, plague was reported in Peru as follows: Lima Department, 8 cases, 6 deaths; Piura Department, 6 cases.

Yellow Fever

Brazil.—Acre Territory.—During the period January 26–28, 1942, 2 deaths from yellow fever were reported in Acre Territory, Brazil.